Claims

[c1]   1. An image decompressing circuit, comprising:
a variable length decoding unit, for receiving a compressed image picture and executing a debug analysis on the compressed image picture, wherein when a result of the debug analysis indicates that the compressed image picture is suitable for a subsequent decoding operation, executing a decoding process in pipeline on the compressed image picture; and
an image picture recovery unit, electrically coupled to the variable length decoding unit, for performing an inverse quantization, an inverse discrete cosine transformation and a motion compensation with a pipeline process after the compressed image picture has been decoded with the pipeline process, so as to recover the compressed image picture.

[c2]   2. The image decompressing circuit of claim 1, wherein when the variable length decoding unit performs the debug analysis on the compressed image picture and finds no error data, the compressed image picture is determined suitable for the subsequent decoding operation.

[c3]   3. The image decompressing circuit of claim 1, wherein

when the variable length decoding unit performs the debug analysis on the compressed image picture and finds an error data, the compressed image picture is reloaded, so as to perform the debug analysis on the compressed image picture again.

[c4]   4. The image decompressing circuit of claim 1, wherein when the variable length decoding unit performs the debug analysis on the compressed image picture and finds more than a predetermined number of the error data and there is no sufficient time to reload the compressed image picture, the compressed image picture is aborted.

[c5]   5. The image decompressing circuit of claim 1, wherein when the variable length decoding unit performs the debug analysis on the compressed image picture and finds less than a predetermined number of the error data and there is no sufficient time to reload the compressed image picture, the compressed image picture is determined suitable for the subsequent decoding operation.

[c6]   6. The image decompressing circuit of claim 1, wherein the variable length decoding unit can selectively turn on or turn off the debug analysis function for the compressed image picture.

[c7]   7. A method of decompressing images, comprising:

receiving a compressed image picture;

executing a debug analysis on the compressed image
picture, wherein when a result of the debug analysis in-
dicates that the compressed image picture is suitable for
a subsequent decoding operation, executing a decoding
operation on the compressed image picture with a
pipeline process; and

performing an inverse quantization, an inverse discrete
cosine transformation and a motion compensation with a
pipeline process after the compressed image picture has
been decoded with the pipeline process, so as to recover
the compressed image picture.

[c8]   8. The method of decompressing images of claim 7,
wherein when executing the debug analysis on the com-
pressed image picture and not finding any error data,
the compressed image data is determined suitable for
the subsequent decoding operation.

[c9]   9. The method of decompressing images of claim 7,
wherein when executing the debug analysis on the com-
pressed image picture and finding an error data, the
compressed image picture is reloaded, and the debug
analysis is executed on the compressed image picture
again.

[c10]   10. The method of decompressing images of claim 7,

wherein when executing the debug analysis on the compressed image picture and finding more than a predetermined number of the error data and there is no sufficient time to reload the compressed image picture, the compressed image picture is aborted.

[c11]   11. The method of decompressing images of claim 7, wherein when executing the debug analysis on the compressed image picture and finding less than a predetermined number of the error data and there is no sufficient time to reload the compressed image picture, the compressed image picture is determined suitable for the subsequent decoding operation.

[c12]   12. The method of decompressing images of claim 7, wherein the debug analysis function for the compressed image picture can be selectively turned on or turned off.